A
SEMINAR REPORT
ON
Search Engine Optimization



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SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE

AWARD OF THE DEGREE OF

BACHELOR OF TECHNOLOGY

(COMPUTER SCIENCE & ENGINEERING)

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CANDIDATE'S DECLARATION

I hereby certify that work which is being presented in the seminar report entitled **"SEO"** by **"Ravi Prakash Pandey"** in partial fulfillment of requirements for the award of degree of **B.Tech.-CSE(3rd year)** submitted in the Department of Computer Science at **Jaipur National University, Jaipur** is an authentic record of my own work carried out.

Signature of the Student

The **B.Tech -CSE (3rd year)** seminar presentation of Ravi Prakash Pandey has been accepted.

Signature of Internal Examiner 1

Signature of External Examiner

Signature of Internal Examiner 2

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INTRODUCTION

Search Engine Optimization

Webmasters and content providers began optimizing sites for search engines in the mid-1990s, as the first search engines were cataloging the early Web. Initially, all a webmaster needed to do was submit a page, or URL, to the various engines which would send a spider to "crawl" that page, extract links to other pages from it, and return information found on the page to be indexed. The process involves a search engine spider downloading a page and storing it on the search engine's own server, where a second program, known as an indexer, extracts various information about the page, such as the words it contains and where these are located, as well as any weight for specific words and all links the page contains, which are then placed into a scheduler for crawling at a later date. Site owners started to recognize the value of having their sites highly ranked and visible in search engine results. According to industry analyst Danny Sullivan, the earliest known use of phrase "search engine optimization" was a spam message posted on Usenet on July 26, 1997. Early versions of search algorithms relied on webmaster-provided information such as the keyword meta tag, or index files in engines like ALIWEB. Meta-tags provided a guide to each page's content. But using meta data to index pages was found to be less than reliable because the webmaster's account of keywords in the meta tag were not truly relevant to the site's actual keywords. Inaccurate, incomplete, and inconsistent data in meta tags caused pages to rank for irrelevant searches.Web content providers also manipulated a number of attributes within the HTML source of a page in an attempt to rank well in search engines. Page and Brin founded Google in 1998. Google attracted a loyal following among the growing number of Internet users, who liked its simple design. Off-page factors such as PageRank and hyperlink analysis were considered, as well as on-page factors, to enable Google to avoid the kind of manipulation seen in search engines that only considered on-page factors for their rankings. Although PageRank was more difficult to game, webmasters had already developed link building tools and schemes to influence the Inktomi search engine, and

these methods proved similarly applicable to gaining PageRank. Many sites focused on exchanging, buying, and selling links, often on a massive scale. Some of these schemes,

or link farms, involved the creation of thousands of sites for the sole purpose of linkspamming. To reduce the impact of link schemes, as of 2007, search engines consider a wide range of undisclosed factors for their ranking algorithms. Google says it ranks sites using more than 200 different signals. The three leading search engines, Google, Yahoo and Microsoft's Live Search, do not disclose the algorithms they use to rank pages.

Search engine optimization (**SEO**) is the process of improving the volume and quality of traffic to a web site from search engines via "natural" ("organic" or "algorithmic") search results for targeted keywords. Usually, the earlier a site is presented in the search results, or the higher it "ranks", the more searchers will visit that site. SEO can also target different kinds of search, including image search, local search, and industry-specific vertical search engines.

As a marketing strategy for increasing a site's relevance, SEO considers how search algorithms work and what people search for. SEO efforts may involve a site's coding, presentation, and structure, as well as fixing problems that could prevent search engine indexing programs from fully spidering a site. Other, more noticeable efforts may include adding unique content to a site, ensuring that content is easily indexed by search engine robots, and making the site more appealing to users. Another class of techniques, known as black hat SEO or spamdexing, use methods such as link farms and keyword stuffing that tend to harm search engine user experience. Search engines look for sites that employ these techniques and may remove them from their indexes.

The initialism "SEO" can also refer to "search engine optimizers", a term adopted by an industry of consultants who carry out optimization projects on behalf of clients, and by employees who perform SEO services in-house. Search engine optimizers may offer SEO as a stand-alone service or as a part of a broader marketing campaign. Because effective SEO may require changes to the HTML source code of a site, SEO tactics may be incorporated into web site development and design. The term "search engine friendly" may be used to describe web site designs, menus, content management systems and shopping carts that are easy to optimize

NARRATION

Search engines run automated programs called spiders that use the hyperlink structure of the web to "crawl" the pages. Once a page has been crawled, its contents can be "indexed" - stored in a giant database of documents that makes up a search engine's "index”. When a request for information comes into the search engine, the engine retrieves from its index all the document that match the query. Once the search engine has determined which results are a match for the query, the engine's algorithm runs calculations on each of the results to determine which is most relevant to the given query.

2.1 Search Engine Basics

2.1.1 Search Engine Result Page (SERP)

A search engine results page, or SERP, is the listing of web pages returned by a search engine in response to a keyword query. The results normally include a list of web pages with titles, a link to the page, and a short description showing where the keywords have matched content within the page. A SERP may refer to a single page of links returned, or to the set of all links returned for a search query. The search engine updates the SERPs periodically to account for new pages, and possibly to modify the rankings of pages in the SERP. SERPS of major search engines like Google and Yahoo! may include different types of listings: contextual, algorithmic or organic search listings. SERPs usually contain advertisements. This is how commercial search engines fund their operations.

2.1.2 Organic search

An organic search is a process by which World Wide Web users find web sites having unpaid search engine listings, as opposed to using the pay per click (PPC) advertisement listings displayed among the search results. The field of search engine optimization, (SEO), is concerned with maximizing the visibility of a web site by making its listings appear more frequently and more prominently in organic search results. Organic results were viewed most often. On average, 9.2 search results were viewed before the first click. On average, consumers spent 10.4 seconds on a page to view the

search results. The average viewing time for organic search result was 1.3 seconds. Searchers looking to carry out a transaction viewed more results, 9.9 on average, compared with 8.5 for information seekers. Buyers also spent more time viewing results, 11.4 seconds compared with 9.4 seconds for searchers.

2.1.3 Paid Placement (PPC)

Pay Per Click or PPC is an advertising method where an advertiser has to make payments for visits based on keywords chosen by them. PPC is applicable for search engines, websites, and advertising networks. PPC involves bidding on the 'keywords' by advertisers, which they think people would write in the search box. For instance, if an advertiser wants to sell a diamond ring, the advertiser would bid on the keyword "diamond ring". The user uses this keyword for searching, looks the ad, clicks on it, and buys it. The payment is made by the advertiser only when the user clicks on the ad.

2.2 Why Optimize?

Web Search as a navigational tool .On average, 45% of visitor traffic use the search engine to navigate.72% of searchers stop with the top ten search results, and 90% stop with the top 30.

2.3 Key Concepts

2.3.1 Conversion funnel

“The Funnel” is a compact and yet powerful SEO (Search Engine Optimization) module that "suggests" other pages to your visitors that would be interesting for them. This module thus serves to increase the power of your "Conversion Pages", Enables us to "suggest" other pages of your site to your visitors, Redirects our visitors from "Landing Pages" to "Conversion Pages", Advertise your other pages to your visitors, Increases the "Average Time on Site", Also use the module as "Tip of the Day" or "Quote of the Day" application.

2.3.2 Home page vs. Landing pages

Search-friendly Usability such as Home Page vs. Landing pages, experienced internet Experts say that if you advertise in pay per click search engines, you should have a landing page for driving the pay per click traffic to it. This landing page is different from home page and should be just focused on selling the product whereas the home page should be optimized for search engines and so is not good in generating sales. The homepage generally has too many different purposes to be able to be optimized to the level that a landing page can be. With landing pages you can focus much more on the individual product/service that your buying traffic for and tweak things that can increase conversion rates but would provide a bad user experience on a home page.Figure1outlines the Top-down design and Figure2 outlines the Shallow-wide design

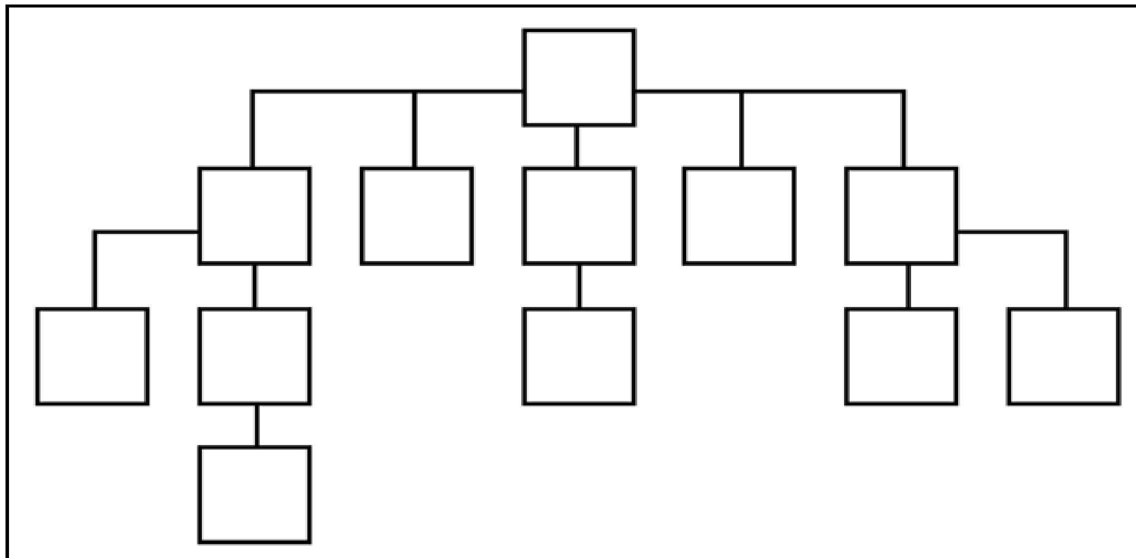


Figure 1

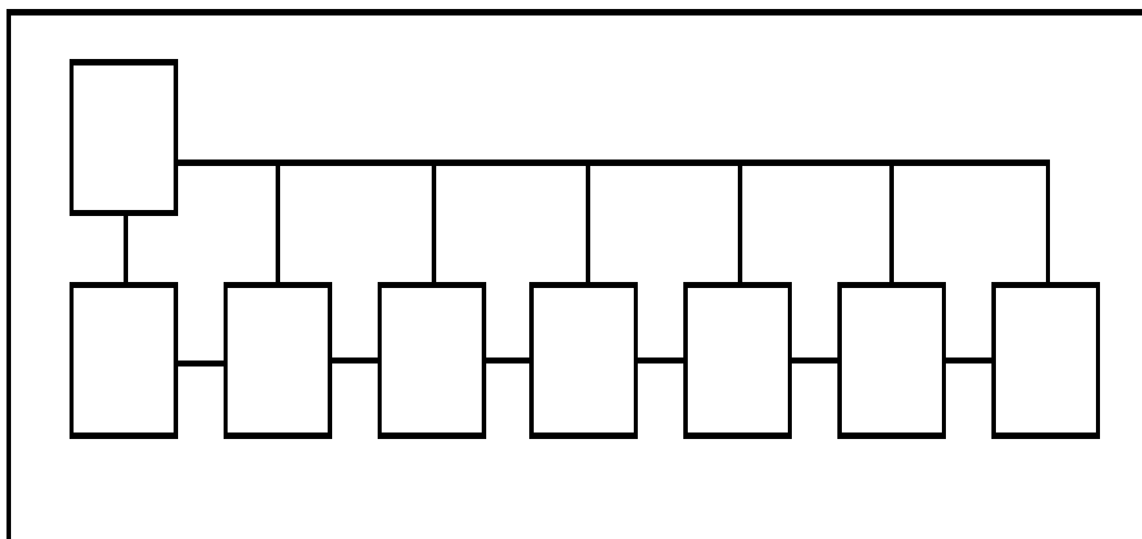


Figure 2

2.3.3 Databases and query string URLs

In databases & query string URLs, a search engine friendly URL doesn't contain a question mark followed by a list of variables and their values. A search engine friendly URL is short and contains the keyword describing page's content best, separated by hyphens. Search engine spiders dislike long and ugly URLs. They get indexed from very popular sites. Links from dynamic pages seem to count less then links from static pages when it comes to ranking based on link popularity. Most search engine crawlers ignores URLs with session Ids and similar

stuff in the query string, to prevent the spiders from fetching the same content over and over in infinite loops. Search engine robots do not provide referrers and they do not accept cookies, thus every request gets a new session ID assigned. Figure3 shows the search engine Simulator

Spider Simulator
Enter URL to Spider

2.4 Optimization

Here we have to register with the university Webmaster and submit URL to directory. As we enter the URL, the search engine will spiders the site and displays it as Title tag. Title Tag - The Title tag gives the search engine a basic understanding of what your web page is about. The "Meta Tag Description" provides a basic description of what's found on the webpage. The Meta Tag Keywords are the same as the keywords that we researched. The Meta Tag Keywords should reflect what's contained on our webpage. Under the Title Tag, there will be a remote anchor links and text. Eg: Anchor link – http://www.url.com.Anchor text – words used in link. When a web page places high in search engine results due to frequent anchor links using rude or insulting keywords called Googlebombing.

2.4.1 Black hat SEO

Black hat SEO is the unscrupulous or deceptive optimization practices intended to Spam users or compete unfairly, it uses irrelevant and misleading keywords, content duplication, link exchanges with irrelevant websites, and creating the contents unethically. Especially the Google is more proactive and keep changing their programs to remove such types of sites. So these black hat SEO will actually provide short-term gains in terms of rankings. Black hat SEO attempts to improve rankings in ways that are disapproved of by the search engines, or involve deception. One black hat technique uses text that is hidden, either as text colored similar to the background, in an invisible div, or positioned off screen. Another method gives a different page depending on whether the page is being requested by a human

visitor or a search engine, a technique known as cloaking. Search engine may penalize sites they discover using black hat methods, either by reducing their rankings or eliminating their listings from their databases altogether.

APPLICATIONS

The advantages of SEO can be divided into at least two groups:

- Effectiveness - depending on a position in SERPs (search engine result pages) there is a great probability of gaining new client that are interested in a certain offer.
- Low cost - it's one of the cheapest forms of advertising. SEO, depending on a subject, can be launched for a price as low as 200 Zl.
- A well optimized website is ranking high also for other key phrases than those initially taken into account, as it's overall rank is high.
- SEO advantages also contain the speed of promotion and spread - localization of a target audience is not a problem, as the Internet has no borders.

Search engine optimization is a very long-lasting type of advertising. A website optimized today will bring new client for a very long time.

CONCLUSION

As mentioned earlier there aren't clear cut rules to good or bad SEO and just when you think you've got it right the rules change and your rankings disappear. The search engines are getting more and more advanced in determining how and what webmasters are doing to get the rankings they've acquired so you have to adapt and spend time researching what might have changed in the algorithm. In the end though the experts, although more practiced at SEO, may or may not know exactly what has changed either and what must be done in order to acquire good rankings.

Refrances

Www.Google.com

www.duckduckgo.com

www.Yahoo.com

Www.hiddenwiki.onion